

Title (en)

METHODS FOR ENHANCING THE EFFECT OF EGCG ON MITIGATING SKELETAL MUSCLE LOSS

Title (de)

VERFAHREN ZUR STEIGERUNG DES EFFEKTES VON EGCG ZUR MINDERUNG VON SKELETTMUSKELSCHWUND

Title (fr)

MÉTHODES D'AMÉLIORATION DE L'EFFET DE L'EGCG SUR L'ATTÉNUATION DE LA PERTE MUSCULAIRE SQUELETTIQUE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2014055905A1] Disclosed herein are methods for enhancing the efficacy of epigallocatechin gallate ("EGCg") in mitigating skeletal muscle loss in a subject. Providing EGCg to a subject in a nutritional composition reduces muscle protein degradation, thereby mitigating skeletal muscle loss in the subject. The combination of EGCg with zinc in a nutritional composition enhances the mitigating effect that EGCg has on muscle loss. Specifically, when used in combination, a nutritional composition containing both EGCg and zinc requires less EGCg to obtain the same mitigating effect that occurs in the same nutritional composition containing EGCg but no zinc.

IPC 8 full level

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Citation (examination)

- US 2012195873 A1 20120802 - MILLER KEVIN BURKE [US], et al
- EP 1712140 A1 20061018 - LARENA [FR]

Citation (opposition)

Opponent : N.V. Nutricia

- US 2009281174 A1 20091112 - OTA NORIYASU [JP], et al
- US 2007015686 A1 20070118 - HEUER MARVIN A [CA], et al
- WO 2007042271 A2 20070419 - DSM IP ASSETS BV [NL], et al
- EP 1712140 A1 20061018 - LARENA [FR]
- US 2012195873 A1 20120802 - MILLER KEVIN BURKE [US], et al
- WO 0000183 A2 20000106 - SIGMA TAU HEALTHSCIENCE SPA [IT], et al
- US 2006239987 A1 20061026 - FOSTER ROBERT [US]
- EP 2036551 A1 20090318 - KAO CORP [JP]
- SCOTT ET AL.: "Association between dietary nutrient intake and muscle mass and strength in community-dwelling older adults: the tasmanian older adult cohort study", J. AM. GERIATR. SOC., vol. 58, 2010, pages 2129 - 2134, XP055628936
- GREEN TEA EXTRACT
- "Green tea extract and its major polyphenol (-)-epigallocatechin gallate improve muscle function in a mouse model for Duchenne muscular dystrophy", AMERICAN JOURNAL OF PHYSIOLOGY, vol. 290, 1 February 2006 (2006-02-01), pages C616 - C625, XP002459514
- SUZUKI ET AL.: "Zinc as an appetite stimulator- the possible role of zinc in the progression of diseases such as cachexia and sarcopenia", RECENT PATENTS ON FOOD, NUTRITION & AGRICULTURE, vol. 3, 2011, pages 226 - 231, XP055628939
- DATABASE GNPD 10 August 1807 (1807-08-10), "Fast-Shake Meal Replacement", XP055628945, Database accession no. 1342706
- "GNC Longevity Factors Strength and Agility Nutrition Shake: French Vanilla", INNOVA MARKET INSIGHTS, 1 August 2011 (2011-08-01), XP055628948
- SUN ET AL.: "Free Zn²⁺ enhances inhibitory effects of EGCG on the growth of PC-3 cells", MOL. NUTR. FOOD RES., vol. 52, 2008, pages 465 - 471, XP055628954
- KAGAYA ET AL.: "Enhancing Effect of Zinc on Hepatoprotectivity of Epigallocatechin Gallate in Isolated Rat Hepatocytes", BIOL. PHARM. BULL., vol. 25, no. 9, 2002, pages 1156 - 1160, XP055628956
- MIRZA ET AL.: "Attenuation of muscle wasting in murine C2C12 myotubes by epigallocatechin-3-gallate", J. CACHEXIA SARCOOPENIA MUSCLE, vol. 5, 2014, pages 339 - 345, XP055628966
- "Proposed rules", FEDERAL REGISTER, vol. 71, no. 212, 2 November 2007 (2007-11-02), pages 62149 - 62175, XP055628968
- WANG ET AL.: "Epigallocatechin-3-gallate effectively attenuates skeletal muscle atrophy caused by cancer cachexia", CANCER LETTERS, vol. 305, 2011, pages 40 - 49, XP002733136, DOI: 10.1016/j.canlet.2011.02.023

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MX 2015004181 A 20131004; PH 12015500756 A 20150406; SG 11201502649W A 20131004; US 201314433538 A 20131004;
US 201715441658 A 20170224